UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,139	04/03/2001	David J. Wetherall	41007.P005	1582

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EXAMINER
BARQADLE, YASIN M

ART UNIT	PAPER NUMBER
2153	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/825,139	WETHERALL ET AL.
	Examiner	Art Unit
	Yasin M Barqadle	2153

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 April 2001</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>08/06/2002</u>.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-28 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35

U.S.C. 112:

> The specification shall conclude with one or more claims particularly
> pointing out and distinctly claiming the subject matter which the applicant
> regards as his invention.

2.   Claim 23 recites the limitation "the apparatus of claim 22"

in line 1.   There is insufficient antecedent basis for this

limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> (a) A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the
> differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

Claims 1-3, 10-11, 17-19 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Lin et al USPN (6269402) in view of

Primak et al USPN. (6598077).

3.   Claims 1-3, 10-11, 17-19 and 22 are rejected under 35

U.S.C. 102(e) as being anticipated by Lin et al USPN (6269402).

As per claim 1, Lin et al teach a method of operation

comprising:

receiving a packet sent by a client device (102,fig.1)

destined for a server (104,fig.1)[server receives data packets

col. 3, lines 33-36];

independently determining whether said packet is a part of

a conversation between the client and the server based at least

in part on persistent information included in said packet

[determining if session identifier exists in currently active

sessions col. 4, lines 46-49 and col. 5, 11-16]; and

handling the packet based at least in part on the result of

said independent determination [communication activity between

the client and the server takes place based on the determined

session identifier in the packet [col. 4, lines 46-49 and col.

5, 11-16].

Although Lin et al show substantial features of the claimed invention as explained in claim 1, he does not explicitly show a routing device.

Nonetheless, routing devices that perform content routing in a client server network are well known in the art and would have been an obvious modification of the system disclosed by Lin et al, as evidenced by Primak et al USPN. (6598077).

In analogous art, Primak et al whose invention is about a system for directing a client request (client 60, fig. 1) for dynamic content to an application server (fig. 1, server 30), disclose a system containing a dynamic content router (fig. 1, router 10) that examines a session communication between client and a server based on information (session identifier) associated with client request [fig. 1, Col. 4, lines 17-51 and col. 6, lines 9-53].

Giving the teaching of Primak et al, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Lin et al by employing the dynamic content routing system of Primak et al because it facilitates the determining and identifying client requests containing verifiable session IDs in order to forward the request to the appropriate application server.

As per claim 2, Lin et al teach the invention, wherein said

independent determination comprises independently verifying a

conversation identifier included in said packet based at least

in part on other information included (compressed ID or client

address and port) in said packet [col. 4, lines 46-49 and col.

5, 11-16].

As per claim 3, Lin et al teach the invention, wherein said

independent verification comprises independently regenerating

the conversation identifier using at least said other

information included in said packet [generating a compressed

session identifier that is derived from the a long session

identifier col. 4, lines 46-49 and col. 5, 11-16]; and

        comparing the independently re-generated conversation

identifier with the included conversation identifier [searching

a database of currently active sessions to determine if it is

currently in use and which session a received packet belongs to.

Hence performing a comparing and identifying col. 4, lines 46-57

and col. 5, 2-16].

As per claim 10, Lin et al teach the method of claim 1, wherein

the method further comprises forwarding the packet to the server

if the packet is deemed to be a part of a conversation between

the client device and the server, and non-forwarding the packet

if the packet is deemed not a part of a conversation between the

client device and the server [col. 6, lines 6-44].

As per claim 11 and 22, these claims include similar limitations

as explained in claim 1 above.

Lin et al further teach a method of operation comprising:

        generating an independently verifiable conversation

identifier for a packet destined for a client device, using at

least persistent information that will be included in said

packet [col.4, lines 9-20],

        including the independently verifiable conversation

identifier with said packet for use by the client device to

include in a subsequent packet sent by the client device

destined for the server [col. 4, lines 9-61]; and

        transmitting said independently verifiable conversation

identifier included packet to said client device [col. 4, lines

9-61].

        Primark et al further teach a summation unit to insert the

independently verifiable conversation identifier with a packet

[col.7, lines 63 to col. 8, lines 9 and col. 11, lines 41-56].

As per claim 17, Lin et al teach a method of operation

comprising:

an interface to receive a packet sent by a client device

destined for a server [fig. 2 and col. 3, lines 51-59]; and

a function unit coupled to the interface to independently

determine whether said packet is a part of a conversation

between the client and the server based at least in part on

persistent information included in the packet [fig. 2 and col.

3, lines 51-59 and col. 4, lines 46-49 and col. 5, 11-16]; and

output a packet disposition signal based at least in part

on the result of said independent determination [fig. 1; col. 4,

lines 46-49 and col. 5, 11-16].

As per claim 18, Lin et al teach the invention, wherein said

function unit is to designed to make said independent

determination by independently verifying a conversation

identifier included in said packet based at least in part on

other information included in said packet [col. 3, lines 51 to

col. 4, line 49 and col. 5, 11-16].

As per claim 19, this claim includes similar limitations as

claim 3 above. Therefore, it is rejected with the same

rationale.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs

of 35 U.S.C. 102 that form the basis for the rejections under

this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for
patent by another filed in the United States before the invention thereof
by the applicant for patent, or on an international application by another
who has fulfilled the requirements of paragraphs (1), (2), and (4) of
section 371(c) of this title before the invention thereof by the applicant
for patent.

4.   Claims 14-16 and 26-28 are rejected under 35 U.S.C. 102(e)

as being anticipated by Bull et al USPN (6799270).

As per claims 14 and 26, Bull et al teach a method of operation

comprising [fig. 1]:

receiving a packet a from a server [col.4, lines 12-34];

extracting from the packet at least an independently verifiable

conversation identifier included in the packet by the server for

inclusion in a subsequent packet of the client device for the

server (col.2, lines 21-36), to allow one or more intermediate

routing devices to be able to independently determine whether to

permit continuing forwarding of the subsequent packet of the

client device to the server [col.2, lines 21-36 and col. 15,

lines 1-60]; and

saving said extracted at least independently verifiable

conversation identifier for said subsequent use [col. 2, lines

21-36 and col. 15, lines 1-60].

As per claims 15 and 27, Bull et al teach the invention, wherein

the method further comprises retrieving at least a saved

independently verifiable conversation identifier [col. 14, lines

35-67];

including the retrieved independently verifiable

conversation identifier in a packet to be sent to the server

[col. 4, lines 12-34; and

the independently verifiable conversation identifier

included packet to the server [col. 2, lines 21-36 and col. 15,

lines 1-60].

As per claims 16 and 28, Bull et al teach the invention, wherein

extracting an included nonce and an associated sequence number

of the nonce, the nonce being independently verifiable by a

party using a deterministic function and having knowledge of a

secret value, based on persistent information included in the

packet [Col. 5, lines 9-34 and Col. 6, lines 7-65].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which

forms the basis for all obviousness rejections set forth in this

Office action:

> (a) A patent may not be obtained though the invention is not identically
> disclosed or described as set forth in section 102 of this title, if the
> differences between the subject matter sought to be patented and the prior
> art are such that the subject matter as a whole would have been obvious at
> the time the invention was made to a person having ordinary skill in the
> art to which said subject matter pertains. Patentability shall not be
> negatived by the manner in which the invention was made.

5.   Claims 4-9, 12-13 and 21, 23-25 rejected under 35 U.S.C.

103(a) as being unpatentable over Lin et al USPN (6269402) in

view of Bull et al USPN (6799270) and further in view of Primak

et al USPN (6598077).

As per claims 4 and 12, although Lin et al and Primak et al show

substantial features of the claimed invention as explained in

claim 1 above, they do not explicitly show a nonce.

Nonetheless, this feature is well known in the art and

would have been an obvious modification of the system disclosed

by Lin et al, as evidenced by Bull et al USPN. (16799270).

In analogous art, Bull et al whose invention is about a system

for securely distributing session keys over a network of a chain

of nodes including client nodes (14), server nodes (18) and

intermediate nodes (18), disclose a bit string of data that includes a nonce (randomly generated value that is concatenated to the end of a message) that is used for identification and verification purpose [Col. 6, lines 39-50 and col. 7, lines 21-60]. Giving the teaching of Bull et al, a person of ordinary skill in the art would have readily recognized the desirability and the advantage of modifying Lin et al by employing the system of Bull et in order to generate a unique value that identifies a client session and to verify the integrity of the response coming from the server [Col. 6, lines 39-50 and col. 7, lines 29-35].

Bull et al further teaches said re-generating the nonce using a deterministic function with a sequence number of the nonce and a plurality of persistent field values extracted from the packet, and a pre-provided secret value as inputs to the deterministic function [Col. 5, lines 9-34 and Col. 6, lines 7-65].

As per claims 5, 13 and 24, Lin et al teach the invention, wherein said plurality of persistent field values comprise one or more of a source address, a destination address and a port number [col. 5, 2-7].

As per claim 6, Bull et al further teach the invention as explained in claim 4 above, wherein the method further comprises at least one of receiving into said routing device said secret value, and equipping/configuring said routing device with said deterministic function [Col. 5, lines 9-34 and Col. 6, lines 7-65].

As per claim 7 and 25, Bull et al further teaches the invention, wherein said independent generation is performed using a selected one of a message authentication code function and an universal hash function [col. 5, lines 39 to Col. 6, lines 7-47].

As per claim 8, Primark et al as modified teach the invention, wherein the method further comprises recording a time of first observation for the nonce if the nonce is a newly observed nonce [col. 9, lines 20-67].

As per claim 9, Primark et al as modified teach the invention, wherein the method further comprises determining if time has elapsed more than a predetermined threshold since a time of first observation was recorded for the nonce, if the extracted

nonce and the independently generated nonce are deemed to be the same [col. 9, lines 20-67].

As per claims 20-21 and 23, these claims include similar limitations as claim 4 and 12 above. Therefore, they are rejected with the same rationale.

Conclusion

6.   The prior made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yasin Barqadle whose telephone number is 571-272-3947. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Burgess can be reached on 571-272-3949. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status

of this application or proceeding should be directed to the

receptionist whose telephone number is 703-305-3900.

Yasin Barqadle

Art Unit 2153

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